An example of this type is weave 1030, a weave of ribbons from the disease and symptoms group. Initially, only a placeholder ribbon for the symptoms is present, which disappears as soon as at least one specific symptom is specified. Right clicking on this brings up the tree-structured dialogue box which is searchable by keywords, diseases and so on, to add more symptoms. Selected symptom or symptom sets are added to the weave, as ribbons in the direction of the placeholder ribbon. When the displayed set of symptoms may be sufficient, the user brings in the disease ribbons by right clicking any symptom ribbon and choosing Pre-diagnose. The DataWeaver queries the diagnostic engine it is connected to (this engine may be any suitable software) which returns a list of probable diseases or disease clusters, with the relative probability of each. The user selects those of interest, or lets the system choose a default subset, starting with the most probable. These diseases or clusters are added to the weave as disease group ribbons. The type of intersection of a particular symptom ribbon and a disease ribbon indicates whether that symptom and disease are relevant to each other. The user can now click at an intersection that shows relevance to change the form of the intersection icon to a 'present' form of intersection that indicates the symptom is present in the patient. Repeating the pre-diagnosis can then lead to a more accurate result.

The display visualises more information than the relevance or presence shown by the intersections. The relative probability of the diseases can also be shown visually by change of width or ordering of the disease ribbons and other criteria may be input by the user or system manager.

The weave in 1130 of Figure 8 shows another interaction mechanism where the horizontal ribbons belong to the 'signs' group and the vertical ribbons belong to the 'disease' group. The relationship between the diseases/conditions and the signs is represented here. Left clicking a particular disease ribbon brings up on the left the relevant signs to look for. The weave shows the relationship between signs and diseases/conditions as "relevance" intersections

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The weave logic can support many other types of interaction scheme for the weave, in either 'build-up' or 'post-build analysis' strategy.

The weave map allows the creation of specialised zones in which synchronised information of a specific nature is displayed for direct comparison, in this case,
5   the time behaviour of indicators which is very important to the health-care givers especially in the period of treatment. It helps physician and nurses to monitor the patient's responses during the treatment process, and modify treatment accordingly. The GUI "explodes" a box in area 1400 (monitoring), where the primary dynamic indicators are displayed in the form the physician
10   is accustomed to, typically as graphs of indicators against time (1440, 1450, 1470, 1480, 1490 and 1495). Correlations between the dynamical behaviour of different indicators may be viewed in the familiar form of pie-charts. The various parameters and conditions of the patient are monitored over time and any necessary modification to the treatment plan is effected. The generated patient
15   record elements are stored. The time box (1400) works as a graphical and interactive progress chart. It can be clicked to get information about it or to scale it differently. As in the case of other ribbon groups, right clicking can add additional ribbons. The time box zone can be concealed to restore the longer-term view and the patient can continue to be monitored for side affects, their
20   implementations for further treatment, etc.

A value of the DataWeaver approach is the ready integration of multiple streams of data for research and discovery purposes. For example, a physician can use this in a novel form of drug discovery where diseases that are related by symptoms, even though underlying causes are different, may lend themselves
25   to improved treatment when such similarities are recognised in the weave map. New diseases can be recognised, initially as clusters of co-occurring symptoms (like the discovery of Acquired Immune Deficiency Syndrome), by using weaves to display the statistical strength of clusters. The research box (1500) is intersected by various forms of knowledge, and the weave diagram now shows
30   a diagonal interlacing to show that a different level of knowledge integration is

being pursued. If a case is classified as being of research potential, parameters
and conditions are added in and captured for clinical research (1510 and 1515).
The research information may be retrieved from the database, or stored in it.
The correlation of research information from several discrete Weaves is one

5   example of the forming of a map.

From the above description of a preferred embodiment of the DataWeaver
method and its implementation in a front end GUI in the clinical context, it will
be evident that the visual representation of data by "ribbons" whose intersections
carry differing significance denoted by the manner in which the intersections are

10 arranged, greatly enhances the ability of the user to ascertain interrelationships
between various items and groups of data. The significance of a group of
intersections is clearly seen at a glance because the arrangements create a visual
analogy of clear flow or blockage along the longitudinal axis of a particular
ribbon or ribbon group. A variation of parameters over time (or other measure)

15 is illustrated by the passage of the relevant ribbons through a synchronous "time
box", allowing clear comparison at a glance. In cases where the weave map is
becoming crowded within the available display area, selected sections of the
diagram may be minimised, particularly within a dynamic context such as a
computer VDU. The use of colour to define data groups or classes and variation

20 of ribbon-width to indicate the magnitude (e.g., of probability) of the data
represented by the ribbon further enhance the user-friendly nature of the
DataWeaver methodology. Further advantages include the use of intersections
as points of data extraction and contribution by means of left or right clicks of
the computer mouse. The weave map allows a general analogy of direction to

25 represent the flow of a process without the restriction of strict sequencing.

In addition user profiles may be provided which control the behaviour and
appearance of the GUI according to the role and preferences of the user. Each
category of user (admissions clerk, nurse, doctor, medical system administrator,
etc) receives a default profile on initial registration with the system, which is

30 customisable according to category. For example, any user may adjust the